

REMARKS

Claims 1-19 are pending in this application. Claims 6-19 have been added. Support for the change to claim 1 is found in Figure 2B, as well as the corresponding description in the specification. Support of new claims 6-19 is found primarily in Figures 1, 2A and 2B, as well as at page 4 of the specification and in the examples therein. It is submitted that all of the present claims are fully supported by the original disclosure of this application such that these claims should be entered of record.

Minor Correction to Claim 1

Claim 1 has been corrected with respect to the typographical error concerning the word "range" in order to remove this objection noted in the Office Action.

Issues under 35 U.S.C. §§ 102(b) and 103(a)

Claims 1, 4 and 5 have been rejected under 35 U.S.C. § 102(b) as anticipated by, or in the alternative, under 35 U.S.C. § 103(a) as obvious over Suzuki '847 (USP 5,400,847).

Claim 2 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Suzuki '847 in view of Bormann '307 (USP 4,869,307).

Claims 1, 4 and 5 have been rejected under 35 U.S.C. § 102(b) as anticipated by, or in the alternative, under 35 U.S.C. § 103(a) as obvious over Chrobak '497 (USP 3,607,497).

Claim 3 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Chrobak '497 in view of Midorikawa '279 (USP 5,591,279).

Claims 1, 2, 4 and 5 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Chrobak '497 in view of Iida '532 (USP 6,412,532) and optionally Bormann '307 or Suzuki '847.

Claim 3 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Chrobak '497 in view of Iida '532 and optionally Bormann '307 or Suzuki '847, and further in view of Midorikawa '279.

#### **Present Invention and Its Advantages**

The present invention is directed to a tape for winding into a tire component, as well as a tire containing the tire component produced by the tape windings. The tape includes at least one embedded cord therein. A feature recited in claim 1 and shown in Figure 2B constitutes a larger thickness in the cord embedded portion. Other features of the present invention include specific cord diameter and tape dimensions. Also, claim 19 recites an embodiment wherein the entire component is the sidewall rubber.

The present invention advantageously allows for more convenient handling and dimensional accuracy in tire production as noted at page 1 of the specification.

**Distinctions between Present Invention and Suzuki '847**

Suzuki '847 discloses radially tires for motorcycles which include a belt cord (11) wound at zero angle or a small angle with respect to the tire equator C so as to be formed from belt ply pieces (7a, 7b, 7c), which are disposed on a carcass (6) having cords arranged at an angle of 70-90 degrees with respect to the tire equator C. Various embodiments are shown in Figures 1-4.

Suzuki '847 fails to disclose or suggest a tape having a larger thickness in the cord embedded portion as recited, for example, in claim 1, as well as other claims directed to various embodiments of the present invention. Suzuki '847 fails to disclose specific cord diameter and tape dimensions as recited in the present claims. Suzuki '847 further fails to disclose employment of the tape in a sidewall rubber component as recited in claim 19, for example. Consequently, significant patentable distinctions exist between the present invention and Suzuki '847 such that this basis for the above-noted rejections should be withdrawn.

**Distinctions between Present Invention and Chrobak '497**

Chrobak '497 discloses a method of applying a cord-reinforced tread to a tire carcass, in which a continuous strip or ribbon (29) of stock including a series of cords (22) is applied to form a tread portion (11) with shoulder portions (14, 15) as shown in Figures 1-4.

Chrobak '497 fails to disclose or suggest a tape having a larger thickness in the cord embedded portion as recited, for example, in claim 1, as well as other claims directed to various embodiments of the present invention. Chrobak '497 fails to disclose specific cord diameter and tape dimensions as recited in the present claims. Chrobak '497 further fails to disclose employment of the tape in a sidewall rubber component as recited in claim 19, for example. Consequently, significant patentable distinctions exist between the present invention and Chrobak '497 such that this basis for the above-noted rejections should be withdrawn.

**Distinctions between Present Invention and Bormann '307**

Bormann '307 discloses a tire having an overlay structure (9) formed of helically wound ribbon (11) with embedded cords (10) therein as shown in Figures 1 and 2. Bormann '307 further

discloses that the ribbon (11) has a width of 10-40 mm and a thickness of 0.4-1.2 mm as noted at the bottom of column 2.

Bormann '307 fails to disclose the embodiment of Figure 2B of the present invention wherein the tape has a larger thickness in the cord embedded portion thereof. Bormann '307 fails to disclose any examples of a tape having one, two or three embedded cords, as opposed to at least about 12 embedded cords shown in the illustrated examples. Bormann '307 fails to disclose the cord diameter. Therefore, significant patentable distinctions exist between the present invention and Bormann '307.

**Distinctions between Present Invention and Iida '532.**

Iida '532 discloses a tire having a strip member (S) which is formed from an unvulcanized rubber composition member having a width of 5-30 mm and a thickness of 0.5-3.0 mm.

Iida '532 fails to disclose the embodiment of Figure 2B of the present invention wherein the tape has a larger thickness in the cord embedded portion thereof. Iida '532 fails to disclose any examples of a tape having one, two or three embedded cords, as opposed to at least about 12 embedded cords shown in the illustrated examples. Iida '532 fails to disclose the cord diameter. Therefore, significant patentable distinctions exist between the present invention and Iida '532.

**Distinctions between Present Invention and Midorikawa '279**

Midorikawa '279 discloses a tire having short fibers (17) within a tread (13) as shown in Figures 2 and 3. Midorikawa '279 discloses at columns 4-5 that the fibers (17) have an average diameter of "0.05  $\mu$ m or more" and "more preferably" short fibers having an average diameter of "0.05 to 0.8  $\mu$ m".

Midorikawa '279 fails to disclose the embodiment of the present invention of Figure 2B wherein the tape thickness is larger than in the cord embedded portion thereof. Midorikawa '279 fails to disclose any embedded cords which have a diameter as large as 0.3 mm. In fact, Midorikawa '279 suggests short fibers having diameters 1,000 times smaller than the cords employed in the tape of the present invention. Consequently, significant patentable distinctions exist between the present invention and Midorikawa '279 such that this basis for the above-noted rejection should be withdrawn.

**Inconsistent Features Preventing Attempt to Combine Cited Documents Together**

It is submitted that significant inconsistent features exist among the various cited documents which prevents the attempt to combine these documents together as asserted in the Office Action. First, note that the tire design of Suzuki '847 requires the belt

ply pieces (7a, 7b, 7c) to be placed on a carcass (6) having cords running perpendicular to the cords of the belt ply pieces, whereas in contrast, the tire design of Bormann '307 shows that the ribbon (11) includes cords which are disposed basically parallel to the cords of the belt structure (8) below. These completely inconsistent cord orientations prevent the attempt to combine specific features of the cords from each of these documents together.

Second, note that Chrobak '497 fails to disclose any underlying "belt structure" as required by both Bormann '307 and Suzuki '847, such that the relevant features from either Bormann '307 or Suzuki '847 cannot be imported into Chrobak '497.

Third, the attempt to combine the incorrect cord diameter described by Midorikawa '279 or the absence of any cord diameter in Iida '582 undermines the assertion that attempting to combine these documents with Chrobak '497 suggest the present invention.

Consequently, it is submitted that significant patentable distinctions exist between the present invention and each of the above-noted documents whether taken separately or improperly combined.

It is submitted for the reasons stated above that all of the presently pending claims define patentable subject matter such that this application be placed into condition for allowance.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

Pursuant to 37 C.F.R. §§ 1.17 and 1.136(a), Applicant(s) respectfully petition(s) for a one (1) month extension of time for filing a reply in connection with the present application, and the required fee of \$110.00 is attached hereto.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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By 

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